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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/233,177	01/19/99	MALLO	5-4518

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EXAMINER
BERMAN, A

ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 11/15/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/233,177

Applicant(s)

MALLO ET AL.

Examiner

Alysia Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) ____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☐ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1 and 7.
- 17) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: _____

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DETAILED ACTION

1. Receipt is acknowledged of the priority papers and preliminary amendment filed 19 January 1999, the declaration filed 4 March 1999, and the information disclosure statement filed 8 July 1999.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Information Disclosure Statement

3. The information disclosure statement filed on 1 January 1999 does not fully comply with the requirements of 37 CFR 1.98 because: there is no explanation of the relevance of document FR 793957. The international search report provided as an explanation of relevance is not linked to the instant application. Therefore, relevance cannot be determined based on the explanation provided by the international search report. Since the submission appears to be *bona fide*, applicant is given **ONE (1) MONTH** from the date of this notice to supply the above mentioned omissions or corrections in the information disclosure statement. **NO EXTENSION OF THIS TIME LIMIT MAY BE GRANTED UNDER EITHER 37 CFR 1.136(a) OR (b).** Failure to timely comply with this notice will result in the above mentioned information disclosure statement being placed in the application file with the noncomplying information **not** being considered. See 37 CFR 1.97(i).

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Oath/Declaration

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The specification to which the oath or declaration is directed has not been adequately identified. See MPEP § 601.01(a).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of

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the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1, 8, 10, 12-14, and 17 recite the broad recitation, for example, "an inverted latex comprising from 20% to 60% by weight" in claim 1, line 5, and the claims also recite, for example, "and preferably from 25% to 45% by weight" in claim 1, line 6, which is the narrower statement of the range/limitation. Applicant is requested to carefully check all claims for any such broad range/narrow range recitations as only one example of many has been given and make the necessary corrections.

8. Regarding claims 4, 5, and 16, the phrases, "preferably" and "in particular" render the claims indefinite because it is unclear whether the limitations following the claims are part of the claimed invention.

9. Regarding claims 1 and 13, the use of the word "type" in lines 3 and 4 of claim 1 and lines 4 and 6 of claim 13 renders the claims indefinite. It is unclear whether Applicant is intending to claim water-in-oil and oil-in-water emulsifiers or something like those emulsifiers. If Applicant's intent is to claim compounds like those emulsifiers, Applicant has not described the compounds that are like the water-in-oil or oil-in-water emulsifiers. Therefore, the metes and bounds of the claims cannot be determined.

10. Regarding claims 1, 7, 9, and 17, the use of the phrase "based on" renders the claims indefinite. It is unclear from the use of the phrase "based on" whether Applicant intends to claim a copolymer made from the compound recited or made from a compound similar to the one recited. If Applicant's intent is to claim a copolymer made from a compound similar to the one

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recited in the claim, Applicant has not described this other compound. Therefore, the metes and bounds of the claims cannot be determined.

11. Regarding claims 6, 11, and 16, it appears that Applicant is claiming Markush groups but the claims are not written in proper Markush form. Examples of proper Markush language are, "selected from the group consisting of A, B, and C," or "wherein ... is A, B, or C."

12. Regarding claim 18, the phrase "up to a temperature above or equal to 40° C" renders the claim indefinite. It is unclear if Applicant's intent is to claim a temperature up to 40° C or a temperature equal to or greater than 40° C.

13. Regarding claim 19, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-4, 8, 10, 11, 14-16, 22, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 503853 ('853).

Document '853 discloses a water-in-oil emulsion that comprises a polymer comprising units of the sodium salt of 2-acrylamido-2-methyl-propane-sulphonic acid (AMPS) (Table 1), acrylamide, and a polyfunctional monomer (abstract). The amount of polymer in the emulsion is

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from 35-60% (page 4, lines 8-10). Water-in-oil and oil-in-water emulsifiers are disclosed at page 3, lines 14-15. The amount of monomer present is at least 30 weight percent (page 3, lines 22-23). For mole percents, see page 3, lines 52-54. The crosslinking agent is preferably, N,N-methylene-bisacrylamide in a molar percent of 0.06 to 1% (page 3, lines 46-49). The amount of the oil phase in the emulsion is 10% (page 7, line 25). For oils, see page 10, lines 10-15.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1-20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5185395 ('395).

Patent '395 discloses a water-in-oil emulsion comprising a copolymer of AMPS and an acidic monomer (abstract) or salts thereof (col. 1, line 62). The surfactant system used is made up of sorbitan monooleate and an ABA block copolymer of polyester-polyethylene oxide-polyester (col. 1, lines 12-14). For amount of emulsifiers, see column 2, lines 24-30. The emulsion is prepared by first adding the monomer to the aqueous phase, emulsifying the aqueous phase in the oil phase and allowing the polymerization to run (col. 1, lines 42-49). The amount of AMPS used is about 10 to 30 weight percent and the amount of anionic monomer used is about 70 to 90 weight percent (col. 1, lines 53-55). Hydroxyethyl acrylate and hydroxyethyl methacrylate are disclosed at column 2, lines 12-13 as additional monomers that may be used to

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make the copolymer. The molecular weight of a monomer is an inherent property and is not given patentable weight over the prior art disclosure of the monomer.

The oil phase makes up about 5 to 35% of the emulsion (col. 2, lines 50-52). Mineral oils are disclosed at column 2, line 59. Additional components such as chain transfer agents and initiators may be used in the emulsion (col. 3, lines 1-2). The initiator may be added to the preliminary emulsion (col. 3, lines 3-5). For initiators, see column 3, lines 17-25. The polymerization is adjusted to a suitable pH (col. 3, lines 39-42) and, after completion, a surfactant such as a polyethylene oxide ester of a fatty acid is added (col. 3, lines 50-51 and 58). The polymerization temperature range is preferably between 35° and 75° C (col. 3, lines 36-39). See example I, column 5 for the amount of polymer in the resulting emulsion.

Absent evidence to the contrary, no criticality is given to the ammonium or sodium salts or the monomers because the prior art discloses salts in general. It is within the skill of the art to select optimal parameters such as molar percents, weight percents, and ratios of components in a composition to achieve a desired result. See *In re Boesch*, 215 USPQ 205 (CCPA 1980). Therefore, no criticality is given to these parameters as claimed without evidence to the contrary.

Because the second emulsifier is added after polymerization, the prior art suggests a temperature that embraces the claimed temperature for addition of this second emulsifier. Burden is shifted to Applicant to show evidence of criticality in a temperature below 50° C for addition of the second emulsifier. Further, since the prior art is silent as to the initiation, burden is shifted to Applicant to show evidence of criticality of this parameter.

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The product claimed by Applicant results in a polymer content of 20 to 60% after distillation. The prior art shows a polymer content of 22%. Therefore, the distillation step is not given great weight because the prior art obtains the results desired by Applicant with the absence of distillation. It would have been prima facie obvious to recover the polymer per se by separating it from the other components.

It would have been obvious to one of ordinary skill in the art at the time of the invention to select optimal temperature ranges and molar and weight percent ranges in the composition as taught by patent '395 with the reasonable expectation of producing a more stable emulsion. The motivation lies in the desire for an emulsion with long-term storage stability.

18. Claims 1-20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 503853 ('853) in view of US 5185395 ('395).

Document '853 teaches all of the limitations as stated above. It does not teach a carboxylic acid monomer, a neutral monomer as claimed, the amount of emulsifiers, or the process as instantly claimed.

Patent '395 teaches the salts of carboxylic acid monomers, the neutral monomers as instantly claimed, the amount of emulsifiers, or the process as stated above. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the process as taught by patent '395 to produce the emulsion as taught by document '853 with the reasonable expectation of producing a stable emulsion. The motivation lies in the desire for a stable emulsion that can be used as a thickener and stabilizer.

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Allowable Subject Matter

19. Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alysia Berman whose telephone number is 703/308-4638. The examiner can normally be reached on 8:00-4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on 703/308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are 703/305-3704 for regular communications and 703/305-3704 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/308-1234.



Alysia Berman
Patent Examiner
November 11, 1999

THURMAN K. PAGE
SUPERVISORY/PATENT EXAMINER
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